CO2015 Software Engineering Project

Credits: 20  Convenor: tbc  Semester: 2nd

Prerequisites: Essential: CO2006, CO2012, CO1003, CO1005, CO1019  Desirable: CO1012

Assessment: Individual work: 40%  Group work: 60%

Lectures: approx. 5 hours  Surgeries: approx. 10 hours  Private Study: 135.0 hours

Subject Knowledge

Aims  According to a recent report of British Computer Society, only above 16% of IT projects can be considered truly successful and over 60% of projects experience severe problems in. The main reason is that software is still developed in an ad hoc way. The purpose of the module is to teach systematic methods of software and system development. Students will gain skills essential in Software Engineering (SE). They will gain understanding of the difficulties and benefits of working in a group on a large SE project.

Learning Outcomes  Students will learn how interact with a customer, how to analyze customer’s requirements, and how to design and construct a large software system. They will learn how to apply modelling and programming concepts in the SE process. They will learn also how to schedule and manage a SE process lifecycle.

Methods  Class sessions together with course notes, textbooks, group discussions and web support.

Assessment  Assessment of the project deliverables.

Skills

Aims  Communication, team work, problem solving, group work

Learning Outcomes  Students will be able to: work as part of a team; analyze customer requirements; design, implement and test a software system; produce project reports and system documentation; manage resources. They will be able to document the system and demonstrate it to the customer.

Methods  Lectures, meetings with group supervisors, group discussions, marked group work, reading.

Assessment  Marked course-work, presentation, project reports, and demonstration of the software system.

Explanation of Prerequisites  In order to implement their system students need to be familiar with the basic techniques of programming as taught in CO1003, CO1005, and web/database development as in CO1019. They will specify and design systems using the software engineering methods taught in CO2006, and also in CO2012.

Course Description

In this course, students will put into practice methods of Software Engineering that have been studied so far. Students will work in groups of about six. Groups will follow a lightweight form of the Unified Process tailored to the needs of this project.

Detailed Syllabus  The practicing of software engineering methods; software life-cycle management; definition and prioritization of project goals; system specification; system design, implementation and testing; quality assurance; system validation against requirements.

Reading List


The Department of Computer Science


**Resources**  Various course notes, web pages, books, study guide, handouts.

**Module Evaluation**  Course questionnaires, course review.